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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/669,651

09/25/2003

Masayuki Naya

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01/28/2005

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EXAMINER

STOCK JR, GORDON J

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 01/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/669,651

**Applicant(s)**

NAYA, MASAYUKI

**Examiner**

Gordon J Stock

**Art Unit**

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Objections*

1. **Claim 35** is objected to under 37 CFR 1.75 as being a substantial duplicate of **claim 17**. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. **Claims 1-39** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. The term "sizable cross sectional area" in **claims 1 and 3** is a relative term which renders the claim indefinite. The term "sizable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "sizable" renders the size of the cross sectional area indefinite. **Claims 2, 4-39** are rejected for being dependent on a rejected base claim.

### *Claim Rejections - 35 USC § 102*

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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6. **Claims 1-4, 11-12, 36, and 38** are rejected under 35 U.S.C. 102(a) as being anticipated by **Johansen (US 2003/0048452)**—previously cited.

As for **claims 1 and 3**, Johansen in an imaging spr apparatus discloses entering collimated light containing a plurality of wavelengths (Fig. 1a: 100, 110 and 120) through a dielectric block (Fig. 1a: 210) of a measuring unit (Fig. 1a: 200) comprising a thin film layer that satisfies an angle condition for SPR (paragraph 0063); selecting a collimated light beam having a predetermined wavelength from the collimated light beam totally reflected from said interface with wavelength selecting means (Fig. 5: 550, 560a-560c); measuring the distribution of optical intensities on the cross section of selected light beam using two dimensional ccd cameras (Fig. 5: 510a-510c; paragraph 0076).

As for **claims 2 and 4**, Johansen discloses everything as above (see **claims 1 and 3**). In addition, he discloses selecting a plurality of collimated light beams of different wavelengths at least three different wavelengths and measuring the respective optical intensities with the respective cameras (Fig. 5: 560a-560c; 510a-510c; paragraph 0076).

As for **claims 11-12**, Johansen discloses everything as above (see **claims 3-4**). In addition, he discloses the thin film layer senses the sample being measured by interacting with it (paragraph 0063: Fig. 2a, 2c).

As for **claims 36 and 38**, Johansen discloses everything as above (see **claim 3**). In addition, the wavelength selecting means comprise: separating means (Fig. 5: 550); selecting means (Fig. 5: 560a-560c); a sweeping means, the orthogonal angular orientation between the filters (Fig. 5: 560c orthogonal to 560b, 560a orthogonal to 560b); wherein, a plurality of wavelengths are selected, three (Fig. 5: 560a-560c).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 5-10, 13-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Johansen (US 2003/0048452)—previously cited in view of Salafsky (US 2002/0094528)—previously cited.**

As for **claims 5-6, 9, 10**, Johansen discloses everything as above (see **claims 3-4**). As for dispersion compensating/suppressing structures, Johansen is silent. However, Salafsky in surface selective optical techniques teaches having dispersion suppression/compensation to minimize the dispersion of the light beam (paragraph 0191). Therefore, it would be obvious to one skilled in the art to have the system comprise dispersion suppression/compensation structures in order to minimize dispersion of light.

As for **claims 7-8**, Johansen in view of Salafsky discloses everything as above (see **claims 5-6**). In addition, Johansen demonstrates that by rotating the angle of the light beam to the spr sensor the face of the dielectric block will be orthogonal to the optical axis (Fig. 7). In addition, for the terms “serves as said dispersion suppressing structure” this is intended use terminology and not given patentable weight.

As for **claims 13-16**, Johansen in view of Salafsky discloses everything as above (see **claims 5-6, 9-10**). In addition, he discloses that the film layer interacts with a particular component of the sample being measured in order to sense it (Figs. 2a and 2c; paragraph 0063).

*Allowable Subject Matter*

9. **Claims 17-35, 37, 39** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

As to **claim 17**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claims 17 and 29**.

As to **claim 18**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claims 18 and 30**.

As to **claim 19**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claims 19 and 31**.

As to **claim 20**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claims 20 and 32**.

As to **claim 21**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claims 21 and 33**.

As to **claim 22**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claims 22 and 34**.

As to **claim 23**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claim 23**.

As to **claim 24**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claim 24**.

As to **claim 25**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claim 25**.

As to **claim 26**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claim 26**.

As to **claim 27**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claim 27**.

As to **claim 28**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claim 28**.

As to **claim 35**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claim 35**.

As to **claim 37**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection the particular selecting means and sweeping means, in combination with the rest of the limitations of **claim 37**.

As to **claim 39**, the prior art of record, taken alone or in combination, fails to disclose or render obvious in a measuring apparatus using attenuated total reflection a rotatable diffraction grating and slit, in combination with the rest of the limitations of **claim 39**.

### *Response to Arguments*

10. Applicant's arguments, see Remarks, filed November 4, 2004, with respect to the objection to the specification and the rejections of claims 1, 3, and 11 under 35 U.S.C. 102(b) with Karube and claims 5, 7, 9, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, and 33 under 35 U.S.C. 103(a) with Karube have been fully considered and are persuasive. The rejections have been withdrawn in relation to the Karube reference. However, a new rejection under 35 U.S.C. 112 second paragraph has been made (see above). Examiner apologizes for the inconvenience but upon further consideration the rejection under 35 U.S.C. 112 second paragraph has been made.

Applicant's arguments filed November 4, 2004 with respect to the rejections of claims 1-4, 11-12 under 35 U.S.C. 102(a) with Johansen and claims 5-10, 13-16 under 35 U.S.C. 103(a) with Johansen have been fully considered but they are not persuasive. As for the argument that Johansen does not teach wavelength selecting means but filtering, Johansen teaches wavelength selecting means: filters for imaging specifically three different wavelengths (Fig. 5: 560a-560c; paragraph 0071). "Wavelength selecting means" and "selecting a collimated light beam having a predetermined wavelength" of claims 1 and 3 do not preclude narrow color filtering. As for not measuring intensities, the cameras do measure intensities (paragraph 0076).



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### *Fax/Telephone Numbers*

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

- 1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and
- 2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

*Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (703) 872-9306*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (571) 272-2431.

The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr., can be reached at 571-272-2800 ext 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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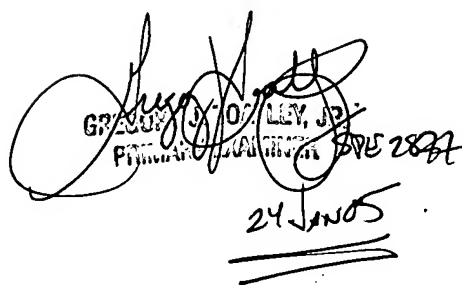
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January 21, 2005

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24 JAN 05